ABSTRACT

An implant composition having controlled resorption rate in vivo for stimulating bone growth, a method of making the implant composition, and a kit of implant materials are disclosed. The implant composition includes a calcium sulfate compound, polymer containing particles, and a setting agent for setting the calcium sulfate compound and the polymer containing particles into a heterogeneous solid composition. Upon setting, the calcium sulfate compound forms a matrix and the polymer containing particles settled within the matrix. The resorption rate of the implant composition in vivo can be controlled of between eight and twenty-four weeks, which substantially matches the rate of bone growth. The implant composition of the present invention can be used for the repair, augmentation, and other treatment of bone.